



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,468	05/29/2001	Hisao Yasuhara	109375	3731

25944 7590 01/06/2004

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER

CANTELMO, GREGG

ART UNIT PAPER NUMBER

1745

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/865,468

Applicant(s)

YASUHARA ET AL.

Examiner

Gregg Cantelmo

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 9/15/03, 10/8/3 and 10/24/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 13,14 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 15, 2003 has been entered.

### ***Response to Amendment***

2. In response to the amendments received October 8, 2004 and October 24, 2003:

- a. Claims 1-11 and 13-19 are pending, with claims 1-11 are withdrawn to a non-elected invention;
- b. The prior art rejection of JP '573 to claims 13 and 14 have been overcome in light of the amendment;
- c. The rejection of claim 17 stands.

### ***Election/Restrictions***

2. Applicant's election with traverse of the restriction of claims 1-11 in Paper No. 13 is acknowledged. The traversal is on the ground(s) that linking claim 17 is allowable.

Art Unit: 1745

This is not found persuasive because claim 17 is not deemed allowable by the Examiner as is evident throughout prosecution. Additionally the scope of the apparatus claim 17 and the non-elected method claims of claims 1-11 are significantly different in scope and therefore even if the apparatus of claim 17 were found allowable, the method would not be rejoined since it does not positively require the apparatus of the elected invention.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 14 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-316220 A (JP '220) in view of U.S. patent No. 4,845,041 (Scuitto).

JP '220 discloses a pretreatment apparatus and method of operating comprising: a cathode 2 for holding a metal sample, anodes 5 (top and bottom of the chamber 4, separated by the cathode section 2) arranged to counter cathode 2, a pretreatment chamber 4 having means for removing contaminants on the surface of the metal sample by sputtering, a reaction chamber 15 connected to the pretreatment chamber having

Art Unit: 1745

means for heating the metal sample and means for detecting trace elements given off by the heated metal sample (Fig. 1 as applied to claims 13, 14, 17 and 19).

A reaction chamber 15 is connected to the pretreatment chamber through a shutter for heating the metal sample and a detector for detecting trace elements given off by the heated sample (Fig. 1 as applied to claim 18).

The difference between claims 13, 14 and 17-19 and JP '220 is that JP '220 does not disclose of means for cooling at least one electrode for sputtering.

Scuitto discloses of using an electrode in an atomic absorption sputtering chamber (Fig. 16). The concept of cooling electrodes in sputtering systems is not held to be a novel concept or contribution to the art and held to be well within the skill of the ordinary worker in the art for the purposes of drawing heat from the electrodes during operation.

The motivation for cooling at least one electrode for sputtering is that it draws off heat from the electrode during sputtering.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the teachings of JP '220 by cooling at least one electrode for sputtering since it would have drawn off heat from the electrode during sputtering.

***Response to Arguments***

5. Applicant's traverses the aforementioned rejection, but fails to present any arguments as to why the rejection should be withdrawn. Absent any persuasive reasoning or evidence to support this traversal, the rejection stands.

***Allowable Subject Matter***

6. Claims 15-16 are allowed.

7. The following is an examiner's statement of reasons for allowance: none of the prior art of record is considered to teach, suggest or render obvious the invention of claims 15 and 16.

In particular while JP '220 teaches of a similar apparatus, JP '220 fails to teach or suggest: an anode for holding a metal sample (JP '220 uses the cathode for holding the metal sample), cathodes arranged to counter the anode (the anodic chamber counters the central cathode of JP '220), of the pretreatment chamber storing the anode, cathodes and metal sample (the chamber of JP '220 is the anode and stores only the cathode and metal sample therein), of a cooling device to cool the cathodes (no cooling device disclosed by JP '220).

Thus for these reasons, claim 15 is held to be distinct over the teachings of JP '220 which is held to be the closest prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 1745

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Application Publication No. 2003/0010633 is drawn to a similar metal treatment apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregg Cantelmo whose telephone number is (571) 272-1283. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan, can be reached at (571) 272-1292.

Gregg Cantelmo  
Patent Examiner  
Art Unit 1745

gc



December 30, 2003